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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,045

06/29/2006

Konrad Roeingh

HM-729PCT

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EXAMINER

PATEL, VISHAL A

ART UNIT

PAPER NUMBER

3676

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,045	Applicant(s) ROEINGH ET AL.	
	Examiner Vishal Patel	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The 112 rejection below are still applicable since applicant has not provided a certified translation of the application (e.g. foreign application which applicant relies on).

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/28/2011 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Unclear what applicant means by roller burnished, furthermore this limitation is considered to be a process limitation and given no patentable weight in an apparatus claim (e.g. [E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the

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same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process).

For the purpose of examination the term rolled and/or roller-burnished is considered to be a process limitation, since after application of roller-burnished method the sealing surface is work hardened and its roughness is minimized (e.g. see application specification page 5, paragraph 2). The examiner agrees that roller-burnished creates a hard sealing surface but there are many known methods to form a hard sealing surface.

It is also noted that applicant has not claimed a hard surface which is smooth and that the sealing surface is coated.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham (US. 6,375,195) in view of Keller (US. WO 02/074461).

Robotham clearly discloses all the limitations of claims 1 and 4-5. For example a device having a sealing ring (e.g. 6), roll neck or roll bush (e.g. 4), a holder (e.g. 14) having elastic sealing elements (e.g. 13a-13b), the sealing elements are supported by the body 13 or springs in the sealing elements and a chock (e.g. 9). The sealing ring (e.g. 6) having a sealing surface that is coated with metal (e.g. column 2, lines 65-68) which is hard (e.g. chrome coating which provides a smooth hard surface). The sealing ring is fastened to the roll neck (e.g. column 2,

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lines 63-65, the sealing ring is fastened since it rotates on the roll neck after being mounted on the roll neck). Furthermore the member 5 prevents the sealing ring from moving axially. The sealing element having two arms that project in axial directions.

Robotham discloses the invention substantially as claimed above but fails to disclose that the two arms project in common axial direction. Keller discloses a device having an elastic sealing element having two arms (e.g. 23 and 24) that project in a common axial direction and the elastic sealing element contacting a sealing ring (4). It would have been obvious to one having ordinary skill in the art at the time of the invention to have the sealing element of Robotham be replaced by the sealing element of Keller, to provide improved sealing between the sealing ring and the elastic sealing element (e.g. see abstract of WO 02/074461).

6. Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (WO 02/074461) in view of Robotham.

Keller clearly discloses a device having a sealing ring (e.g. 4), roll neck or roll bush (e.g. 1), a holder (e.g. 10) having elastic sealing elements (e.g. 23-24), the sealing elements are supported by the body or springs in the sealing elements and a chock (e.g. 5). The sealing ring (e.g. 4) having a sealing surface. The sealing ring is fastened to the roll neck (e.g. figures). Furthermore the member 22 prevents the sealing ring from moving axially. The sealing element having two arms that project in a common axial direction (e.g. 23 and 24 project in a common axial direction).

Keller discloses the invention substantially as claimed above but fails to disclose that the sealing surface having a smooth surface with a hard surface coating. Robotham discloses a seal ring (e.g. 6) having a sealing surface (e.g. surface of 6 that is coated) that has a smooth coated

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surface (e.g. column 2, lines 60-68). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the sealing surface of Keller to have a coating as taught by Robotham to reduce heat that will provide longer lasting sealing (e.g. column 3, lines 1-5 of Robotham).

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham and Keller and further in view of Draskovich et al (e.g. 5,544,897).

Robotham and Keller disclose the invention substantially as claimed above but fail to disclose that the sealing surface is nitrided (particular process of nitriding is considered to be method limitation and given little patentable weight in an apparatus claim particular a nitrided coating is taught). Draskovich discloses a device having a sealing element (e.g. 22) contacting a sealing ring (e.g. 32) that has a coating of nitrided (e.g. 42). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the metal coating (e.g. chrome coating) Robotham and Keller to be replaced by a nitrided coating as taught by Draskovich, since having one metal coating replaced by another is considered to be art equivalent (column 3, lines 4-5 of Draskovich).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham and Keller and further in view of Yoshida (US. 7,063,193).

Robotham and Keller discloses the invention substantially as claimed above but fails to disclose that the sealing surface is treated with hardening treatment and also a coating on the hardened sealing surface as argued by applicant (e.g. process that causes the sealing surface be hardened, which is claimed by applicant and argued). Yoshida discloses a sealing ring (e.g. sealing ring having a contact surface 200) with a cylindrical surface (e.g. surface 200 that is

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contacted by the lip seal 127e, figure 7), the cylindrical surface is a hardened surface (e.g. column 15, lines 29-30), the cylindrical surface has an oxidizing treatment (e.g. provides oxidized sealing surface, column 15, lines 42-47), the cylindrical surface also has a coating including one of PTFE, Nickel dispersion plating, Chrome plating and electroless Nickel plating. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the sealing surface of Robotham and Keller to have a hardened surface which is oxidized and have a coating as taught by Yoshida, to provide corrosion resistant, superior strength, heat resistant and anti wearing property (e.g. column 15, lines 38-42 of Yoshida).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller and Robotham and further in view of Draskovich et al (e.g. 5,544,897).

Keller and Robotham disclose the invention substantially as claimed above but fail to disclose that the sealing surface is nitrided (particular process of nitriding is considered to be method limitation and given little patentable weight in an apparatus claim particular a nitrided coating is taught). Draskovich discloses a device having a sealing element (e.g. 22) contacting a sealing ring (e.g. 32) that has a coating of nitrided (e.g. 42). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the metal coating (e.g. chrome coating) Keller and Robotham to be replaced by a nitrided coating as taught by Draskovich, since having one metal coating replaced by another is considered to be art equivalent (column 3, lines 4-5 of Draskovich).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller and Robotham and further in view of Yoshida (US. 7,063,193).

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Keller and Robotham discloses the invention substantially as claimed above but fails to disclose that the sealing surface is treated with hardening treatment and also a coating on the hardened sealing surface as argued by applicant (e.g. process that causes the sealing surface be hardened, which is claimed by applicant and argued). Yoshida discloses a sealing ring (e.g. sealing ring having a contact surface 200) with a cylindrical surface (e.g. surface 200 that is contacted by the lip seal 127e, figure 7), the cylindrical surface is a hardened surface (e.g. column 15, lines 29-30), the cylindrical surface has an oxidizing treatment (e.g. provides oxidized sealing surface, column 15, lines 42-47), the cylindrical surface also has a coating including one of PTFE, Nickel dispersion plating, Chrome plating and electroless Nickel plating. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the sealing surface of Keller and Robotham to have a hardened surface which is oxidized and have a coating as taught by Yoshida, to provide corrosion resistant, superior strength, heat resistant and anti wearing property (e.g. column 15, lines 38-42 of Yoshida).

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. P./

Primary Examiner, Art Unit 3676

/Vishal Patel/

Primary Examiner, Art Unit 3676